# Course Specification
# Student Version

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|---|---|
| **Course Title:** | Medical Imaging |
| **Course Code:** | MDI 408 |
| **Department:** | Basic Medical Sciences |
| **Program:** | Bachelor of Medicine and Surgery |
| **College:** | Vision College in Riyadh |
| **Institution:** | Vision College in Riyadh |
| **Revised:** | July 2025 |

## A. Course Identification

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| **1. Credit hours:** 4 (2+1+1) |
| **2. Level/year at which this course is offered:** Level 8/Year 4 |
| **3. Pre-requisites for this course (if any):** **RES305,HPS305,MSS306,ENS306,GIS306,NSC307,UGS307,FMT307,CVS305** |
| **4. Co-requisites for this course (if any):** None |

## B. Teaching Methods

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|---|---|
| **1** | Interactive lectures |
| **2** | Skill lab clinical sessions |
| **3** | PBL |

## C. Course Description and Objectives

**1. Course Description**

The course is designed to prepare the student for the study of the different imaging modalities used for diagnostic purposes, the differences between these modalities and their abilities to demonstrate the anatomical structures in all body systems with regards to the advantages and disadvantages of each.

**2. Course Main Objective**

The goal of this course is to explain the normal structure and function of the musculoskeletal and the pathogenesis of various diseases and the ways in which they affect this system, with reference to the pharmacological principles of drugs relevant to management of this diseases.

**3. Course Objectives**

**By the end of this course, students should be able to:**

- **Apply knowledge of anatomical structures to analyze and interpret clinical case studies of medical imaging.**
- **Explain and interprete the principles of essential clinical investigations.**
- **Apply personal judgments for analysis, problem-solving and clinical reasoning**
- **Demonstrate effective debating and probing techniques while interacting with colleagues during PBL or simulated patients in OSCE.**
- **Demonstrate positive group dynamics and teamwork skills during PBL, Seminar and OSCE.**
- **Create a self-development plan with milestones**

## D. Course Content

| No. | List of Topics |
|---|---|
| 1 | Introduction to radiation physics |
| 2 | Extremities Imaging |
| 3 | Head & Neck, spine and brain Imaging |
| 4 | Chest Imaging |
| 5 | Abdomen and Pelvis Imaging |
| 6 | **Contrast radiology** |
| 7 | **Woman radiology** |
| 8 | **Basis of ultrasound** |
| 9 | **Common radiological abnormalities** |

## E. Assessment Tools

| # | Assessment task | Percentage of Total Assessment Score |
|---|---|---|
| 1 | Midterm Exam | 20% |
| 2 | Continuous Assessment (quizzes&seminars) | 20% |
| 3 | Final Written Exam | 20% |
| 4 | OSPE | 20% |
| | **Total** | **100%** |

## F. Learning Resources

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|---|---|
| **Essential References** | **Far Physics for diagnostic imaging**; Roberts and wiliam; Elsiver 2d edition ( 2008)<br>**Anatomy for diagnostic imaging**; Stephanie Rayn; Elsiver 3rd edition ( 2013 )<br>**Diagnostic imaging** Andrea ; john willy 7th edition ( 2013 )•Betram G Katzung, ed. Basic and Clinical Pharmacology, 10th edn. Lange. 2004. |
| **Supportive References** | Snell RS. Clinical Anatomy for Medical Student, 7th edn., Lippincott,Williams&Wilkins, 2004. |
| **Electronic Materials** | • http://eradiology.bidmc.harvard.edu/<br>• http://www.med-u.org/core<br>• http://www.meddean.luc.edu/lumen/MedEd/Radio/curriculum/radiology-curric1_f.htm<br>• http://www.learningradiology.com/medstudents/medstudtoc.htm<br>• http://radiologymasterclass.co.uk/ |
| **Other Learning Materials** | **None** |